

Split

Work Order ID 157091 -1

157091

Page 1

Monday, February 13, 2017 11:46:51 AM

Item ID: D5359-041 Accept *N900040100* Setup Start *NS1*
Revision ID: Stop *NS2*
Item Name: Strut Assembly, LH/RH
Start Date: 2/21/2017 Start Qty: 1.00 *3* Cust Item ID:
Required Date: 2/21/2017 Req'd Qty: 3.00 *3* Customer:
Reference:

Approvals: Process Plan: [Signature] Date: FEB 13 2017 Tooling: Date: Run Start *NR1*
QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D5359	B

110 0.00
110
Small Fab Memo 0.10
Small Fab 1- CUT SQUARE TUBING AT 48.00"

3 FF FEB 14 2017 P10

112 0.00
112
CNC Bend 1 Memo 0.01
CNC Delta 100 Bender 1- FORM TUBING AS PER DWG USING DT10300

DAS 10 989
using CNC Bender 100
And Falio 32
Bend prog D5359 0.00

③ DP 17-2-15

114 0.00
114
Small Fab Memo 0.01
Small Fab 1- TRIM OFF EXTRA MATERIAL USING DT10300
2- DEBURR

3 FF FEB 15 2017

DQA: Ant Date: 2017-04-05

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: RCM Date: MAR 10 2017Work Order update only ☐

Work Order: <u>157091</u>		DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Part No. <u>D5359-041</u>		Rework ☐		Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐		
NCR No. <u>17-6331</u>		Scrap ☒		Machining ☐	Small Fab ☒	Prod. Eng. Coord. ☐	Quality ☐		
		Use-as-is ☐		Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐		
		Suspected Unapproved ☐		Large Fab ☐	Composite ☐	Supplier ☒			
Date: <u>17-03-06</u>		Step #: <u>110</u>		QTY Effective: <u>4'</u>			MRB (QSI042) Approval		
							DAS 9 9-89 17-03-06		
Description Work Order Deviation				Disposition				Completed By	
FOUND 4 FEET TUBING .750" WALL OF .049" WITH CRACKS IN THE SEAM				SCRAP DESTROY 4 foot				FF	
POOR QUALITY MATERIAL				M136378				FEB 15 2017	
								Lead hand / Supervisor Approval Verification	
								Cpl	
								FEB 15 2017	
								QC / QA Coordinator Approval	
								DAS 9 9-89 17-03-06	
Root Cause				FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☒	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☒	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐ _____							

Work Order ID 157091

Monday, February 13, 2017 11:46:51 AM

157091

Page 3

Item ID: D5359-041

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Strut Assembly, LH/RH

Start Date: 2/21/2017 Start Qty: 3.00

3

Cust Item ID:

Required Date: 2/21/2017 Req'd Qty: 3.00

3

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC8- Inspect parts - second check	0.00							DAS 14 9-89
150						3	0		
QC	Memo	0.01							17/02/28
Quality Control									
160	White Gloss(Ref:4.3.5.2) per OSI005 4.3-Steel	0.00							
160									
Powdercoat	Memo	0.01							
Powder Coating	START TIME: 1:20 OVEN TEMPERATURE: 160° FINISH TIME: 1:50								
170	QC3- Inspect Part Finish	0.00							DAS 38 9-89
170						3			
QC	Memo	0.01							
Quality Control									

FEB 28 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
240 81 85-4				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
☐ OTHER : _____					

Work Order ID 157091

Monday, February 13, 2017 11:46:51 AM

157091

Page 4

Item ID: D5359-041

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Strut Assembly, LH/RH

Start Date: 2/21/2017 Start Qty: 3.00

3

Cust Item ID:

Required Date: 2/21/2017 Req'd Qty: 3.00

3

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180		0.00							
180									
Small Fab		0.01							
Small Fab	Memo								
	1- ASSEMBLE INSERT IN TUBE AS PER DWG								
	DO NOT INSTALL CLEVIS								
190		0.00							
190									
Mill Conv		0.01							
Conventional Milling Machine	Memo								
	1- DRILL WITNESS HOLES TRUE BOTH WALLSW AS PER DWG, SHEET								
	2, DETAIL A AND VIEW B-B								
	2- DEBURR								
200	QC5- Inspect part completeness to step on W/O	0.00							
200									
QC	Memo	0.01							
Quality Control									

MAR 01 2017

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By 		
							Lead hand / Supervisor Approval Verification 		
QC / QA Coordinator Approval 									

Root Cause				FAULT CATEGORY			
☐ Environment	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong		
☐ Design	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions		
☐ Doc/Data	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance		
☐ Equip/Tooling	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect		
☐ Handling/Pre	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing		
☐ Material	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved		
☐ Internal Transport	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing		
☐ Tribal Knowledge	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish		
☐ LOA	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread		
☐ Substation	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence		
☐ Past Expiry Date	☐ Manufacturing Process	OTHER : _____					
☐ Misidentified	☐ Past Due						

157091

Monday, February 13, 2017 11:46:51 AM

N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 2/21/2017 **Start Qty:** 3.00 ***3***

Cust Item ID:

Required Date: 2/21/2017 Req'd Qty: 3.00 *3*

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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0.00

210

Small Fab

Memo

0.01

Small Fab

ASSEMBLE CLEVIS AND NUT AS PER DWG

QC5- Inspect part completeness to step on W/O

0.00

220

QC

Memo

0.01

Quality Control

DAS
38
9-89

MAR 01 2017

Identify as per dwg & Stock Location: 5F338 0.00

0.00

230

Packaging

Memo

0.01

Packaging

DAS
6
9-8-8

MAR 01 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
QC / QA Coordinator Approval									

Root Cause				FAULT CATEGORY			
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong		
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions		
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance		
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect		
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing		
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved		
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing		
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Misabeled	☐ Finish		
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread		
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence		
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____					
Misidentified ☐	☐ Past Due						

Work Order ID 157091

Monday, February 13, 2017 11:46:51 AM

157091

Page 6

Item ID: D5359-041

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Strut Assembly, LH/RH

Start Date: 2/21/2017 Start Qty: 3.00

3

Cust Item ID:

Required Date: 2/21/2017 Req'd Qty: 3.00

3

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

240

QC21- Final Inspection - Work Order Release

0.00

240

QC

Memo

0.05

Quality Control

DAS
21
9-89

MAR 0 1 2017

DAS
21
9-89

MAR 0 1 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Picklist Print

Monday, February 13, 2017 11:47:11 AM

Page 1

Work Order ID: 157091

157091

Parent Item: D5359-041

D5359-041

Parent Item Name: Strut Assembly, LH/RH

Start Date: 2/21/2017

Required Date: 2/21/2017

Start Qty: 3.00

Required Qty: 3.00

Comments: IPP Rev: A RQ 16.03.23 Verified by: DD
17.01.20 AS PER REV.B DD VERF:JLM

IPP REV:B

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D2690-6		Manufactured	No				Each	15.0000		6			
D2690-6									**			DAS 30 9-89	
Lanyard													

Location	Loc Qty	Loc Code
ST009	15	
155325	15	

M304TR0.750W.049		Purchased	No				f	181.1371		10.52621			
M304TR0 750W 049									**			FF	FEB 14 2017
304 RD Tube .750 x .049W													

m 304TS0.750W.049

FEB 16 2017

Location	Loc Qty	Loc Code
GA002	181.1370741	
M134528	30.2105266	
M134824	4.8478935	
M135093	1.905367	
M135242	14.0073785	
M135373	16.44849	
M135709	0.0790537	
M135857	0.0003668	
M136323	0.045893	
M136667	13.592105	
M136760	100	

D5359-3		Manufactured	No				Each	2.0000		6			
D5359-3									**			DAS 30 9-89	
Insert													

Location	Loc Qty	Loc Code
prelim	2	
156007	2	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause			FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____				
Misidentified ☐	Past Due ☐					

Picklist Print

Monday, February 13, 2017 11:47:11 AM

Work Order ID: 157091

157091

Parent Item: D5359-041

D5359-041

Parent Item Name: Strut Assembly, LH/RH

Start Date: 2/21/2017

Required Date: 2/21/2017

Start Qty: 3.00

Required Qty: 3.00

D5359-5 Manufactured No

Each

2.0000

3

30
9-89

D5359-5

Clevis, Aircraft End

**

Location

Loc Qty

Loc Code

prelim

2

156008

2

3

D5359-7 Manufactured No

Each

3.0000

3

30
9-89

D5359-7

Clevis, Basket End

**

Location

Loc Qty

Loc Code

ST165

3

156009

3

3

AN3CH11A Purchased No

Each

2.0000

6

DAS
30
9-89

AN3CH11A

Bolt (Drilled Head)

**

Location

Loc Qty

Loc Code

GA

2

m136685

2

H136 8C3 (4)

2

AN3CH12A Purchased No

Each

8.0000

6

DAS
30
9-89

AN3CH12A

Bolt (Drilled Head)

**

Location

Loc Qty

Loc Code

GA

8

m136685

8

6

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Picklist Print

Monday, February 13, 2017 11:47:11 AM

Work Order ID: 157091

157091

Parent Item: D5359-041

D5359-041

Parent Item Name: Strut Assembly, LH/RH

Start Date: 2/21/2017

Required Date: 2/21/2017

Start Qty: 3.00

Required Qty: 3.00

MS17984-C405

Purchased

No

Each

5.0000

3

DAS
30
9-89

MS17984-C405

Pin, Quick Release

**

MAR 03 2017

Location

Loc Qty

Loc Code

over005

3

B157167

③

153302

3

ST315

2

146282

2

MS17984-C608

Purchased

No

Each

1.0000

3

DAS
30
9-89

MS17984-C608

Pin, Quick Release

**

MAR 03 2017

Location

Loc Qty

Loc Code

ST314

1

M136717

1

1

MS21043-3

Purchased

No

Each

1,004.000

12

DAS
30
9-89

MS21043-3

Nut

**

MAR 03 2017

Location

Loc Qty

Loc Code

FG

80

103691

80

FP001

403

m130673

11

m136182

392

GA

393

m133990

27

m136295

366

ST302

59

m135864

59

ST304

69

m131340

69

M136717 ⑫

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐			
Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
OTHER : ☐					

Picklist Print

Monday, February 13, 2017 11:47:11 AM

Work Order ID: 157091

157091

Parent Item: D5359-041

D5359-041

Parent Item Name: Strut Assembly, LH/RH

Start Date: 2/21/2017

Required Date: 2/21/2017

Start Qty: 3.00

Required Qty: 3.00

NAS1149C0363R

Purchased

No

Each

217.0000

30

NAS1149C0363R

DAS
30
9-89

Washer

Location

Loc Qty

Loc Code

FP001

129

m133077

129

GA

79

m133077

79

30

ST266

9

m133077

9

NAS509-6C

Purchased

No

Each

25.0000

6

NAS509-6C

DAS
30
9-89

Nut

Location

Loc Qty

Loc Code

ST551

25

M128110

3

M128429

10

M129913

12

3
3

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

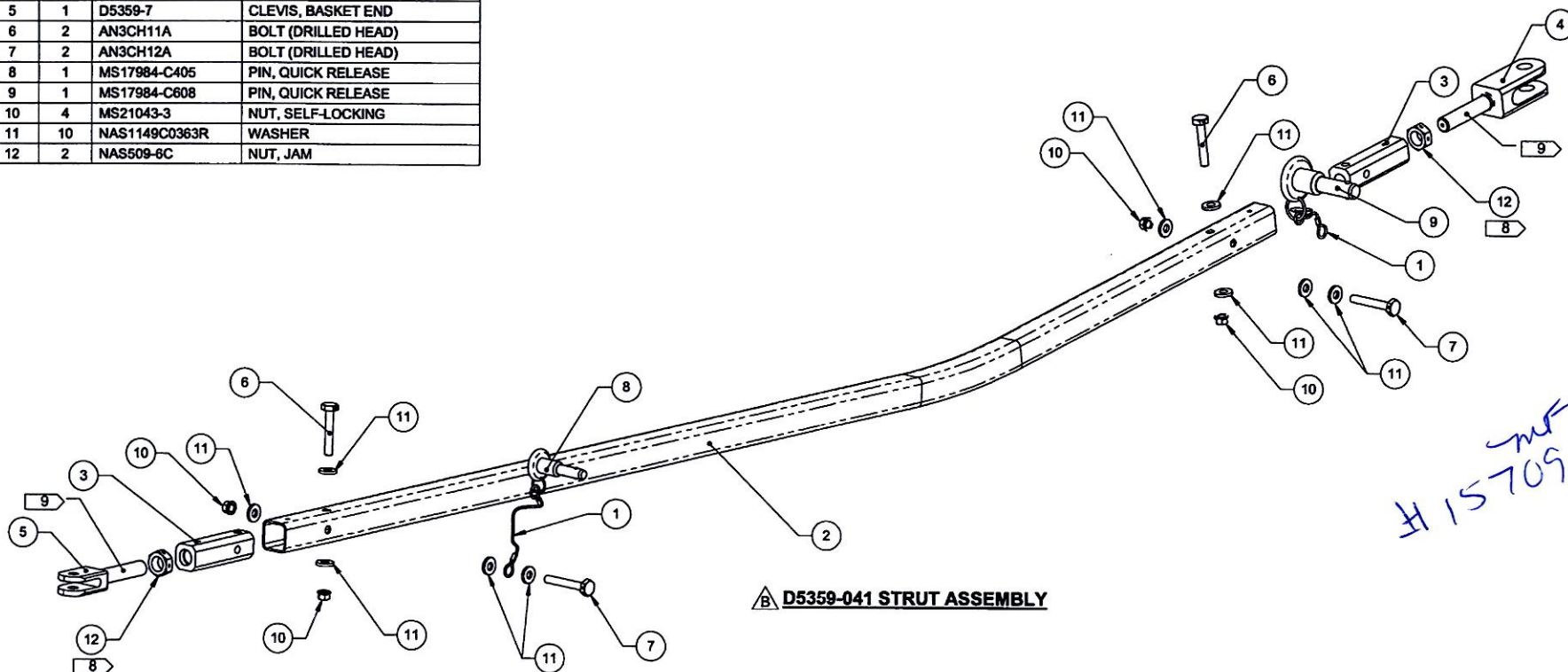
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By Lead hand / Supervisor Approval Verification	

Root Cause				FAULT CATEGORY			
☐ Environment	☐ Design	☐ Doc/Data	☐ Equip/Tooling	☐ Handling/Pre	☐ Material	☐ Internal Transport	☐ Tribal Knowledge
☐ No Re-verification	☐ Operator	☐ Offset/Setup	☐ Supplier	☐ Training	☐ Use for Testing	☐ Poor Information	☐ Rushing
☐ Pressure/Forced	☐ Bending	☐ Centre Not Concentric	☐ Cracks	☐ Crimp/Kink/Ripple/Wave	☐ Cuffs	☐ Crushing	☐ Heat Treat
☐ Temperature/Cure	☐ Set-up	☐ BOM/Route	☐ Broken/Damage/Defect	☐ Inspection Incomplete/Unqualified	☐ Contamination	☐ Countersink	☐ Cut Too Short
☐ Power Loss/Surge	☐ Folio/Program	☐ Grain	☐ Weld	☐ Wrong Stock Pulled	☐ Out of Sequence	☐ Off-set	☐ Mislabeled
☐ Positioned Wrong	☐ Outside Dimensions	☐ Over/Under tolerance	☐ Part Incorrect	☐ Part Lost/Missing	☐ Part Moved	☐ Drawing	☐ Finish
☐ Misread	☐ Turning Sequence						
☐ Past Expiry Date	☐ Misidentified	☐ Past Due	OTHER : _____				

ITEM	QTY -041	P/N	DESCRIPTION
	X	D5359-041	STRUT ASSEMBLY
1	2	D2690-6	LANYARD ASSEMBLY
2	1	D5359-1	STRUT
3	2	D5359-3	INSERT
4	1	D5359-5	CLEVIS, AIRCRAFT END
5	1	D5359-7	CLEVIS, BASKET END
6	2	AN3CH11A	BOLT (DRILLED HEAD)
7	2	AN3CH12A	BOLT (DRILLED HEAD)
8	1	MS17984-C405	PIN, QUICK RELEASE
9	1	MS17984-C608	PIN, QUICK RELEASE
10	4	MS21043-3	NUT, SELF-LOCKING
11	10	NAS1149C0363R	WASHER
12	2	NAS509-6C	NUT, JAM



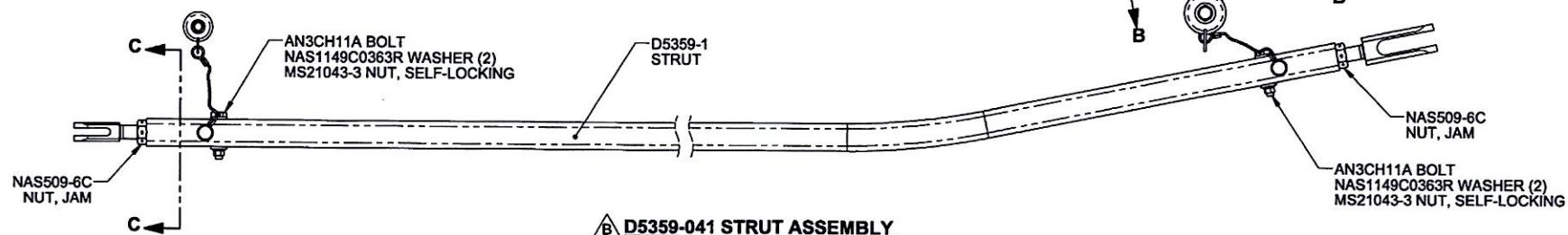
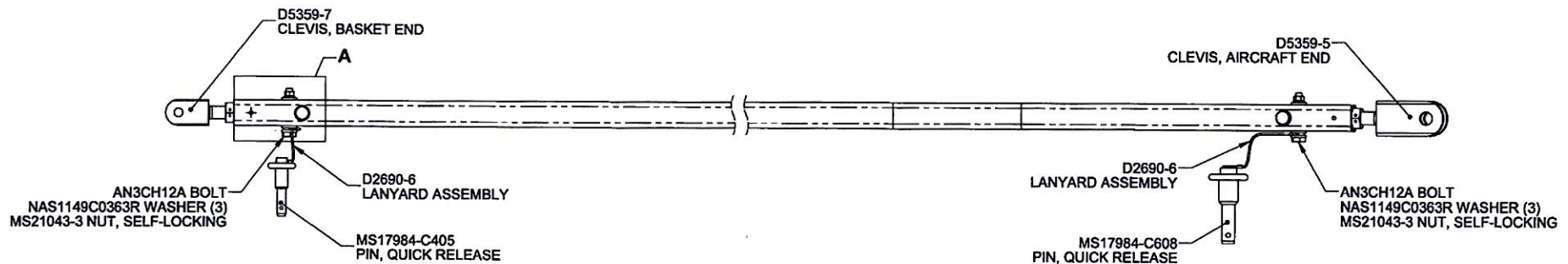
D5359-041 STRUT ASSEMBLY

- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: IDENTIFY PER DART QSI 044 6.1
 - 7) WEIGHT: 2.48 lbs
 - 8) HAND TIGHTEN NAS509-6C NUT
 - 9) USE TECTYL 502C CLASS I, MIL-PRF-16173E GRADE 2 OR EQUIVALENT ANTI-SEIZE COMPOUND ON THREAD

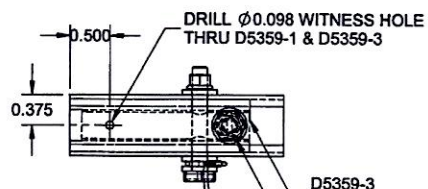
B	REDESIGNED TO BE COMPATIBLE WITH BOTH LH + RH INSTALLATIONS. -042 DELETED.	AJS	16.12.12
A	NEW ISSUE	VS	15.11.23
REV.	DESCRIPTION	BY	DATE
DESIGN	VS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	NO		
CHECKED	AJS	DRAWING NO.	REV. B
MFG. APPR.	DD	D5359	SHEET 1 OF 4
APPROVED	WM	TITLE	SCALE
DE APPR.	DS	STRUT ASSEMBLY	NTS
DATE	16.12.12	COPYRIGHT © 2015 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

RELEASED
2017-02-10
EW 13-508
522 en

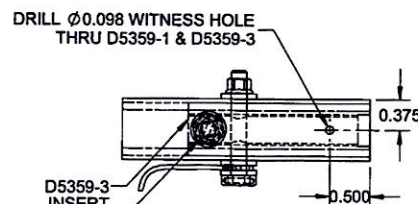
APPROVED



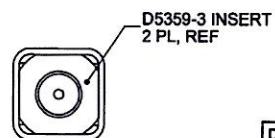
D5359-041 STRUT ASSEMBLY



DETAIL A
SCALE 2X



VIEW B-B
SCALE 2X
ROTATED 11° CW



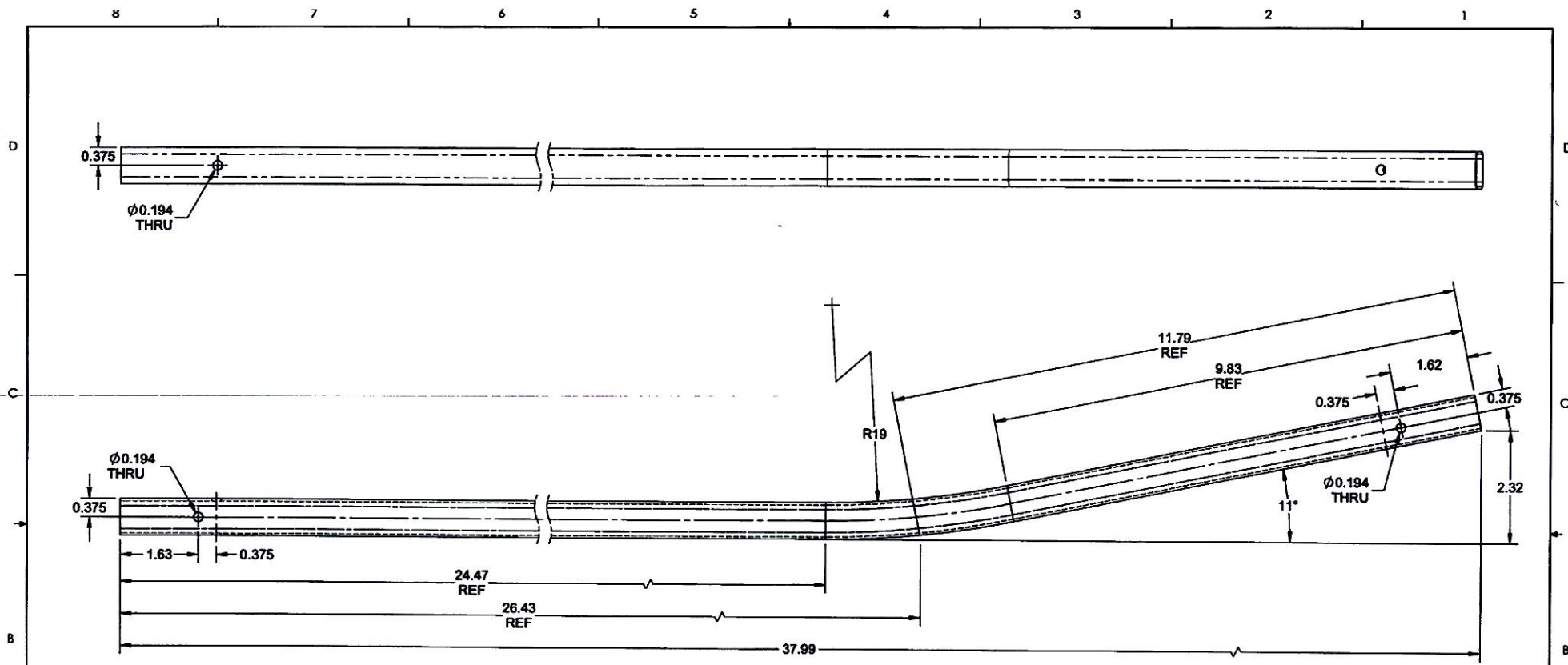
SECTION C-C
SCALE 3X

RELEASED
2017-02-10

APPROVED

DESIGN	VS
DRAWN	NO
CHECKED	AJS
MFG. APPR.	DD
APPROVED	WM
DE APPR.	DS
DATE	16.12.12

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D5359	REV. B SHEET 2 OF 4
TITLE STRUT ASSEMBLY	SCALE NTS
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D5359-1 STRUT

NOTES:

- 1) MATERIAL: AISI 304/316 SEAMLESS STAINLESS STEEL SQUARE TUBE, 0.75 X 0.75 X 0.049 WALL
REF DART SPEC M304TS0.750W.049
- 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 1.40 lbs
- 8) FLAT LENGTH 38.21 REF

RELEASED
2017-02-10

APPROVED

DESIGN	VS
DRAWN	NO
CHECKED	AJS
MFG. APPR.	DD
APPROVED	WM
DE APPR.	DS
DATE	16.12.12

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D5359	REV. B SHEET 3 OF 4
TITLE STRUT ASSEMBLY	SCALE NTS
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